

Big Monitoring Fabric: The Next-Generation Network Packet Broker

The exponential growth seen in data center size, bandwidth and traffic, as well as the need to ensure that networks are compliant, secure, and performing as expected, have been testing the limits of traditional network monitoring and security designs. The traditional “box-by-box” approach, based on proprietary network packet brokers (NPBs), has proven to be challenging to scale and operationally complex for organization-wide monitoring.

Big Switch Networks is transforming network monitoring and security, using SDN techniques to build highly-scalable, operationally intuitive fabrics, run on open networking switches (britebox/whitebox), that deliver pervasive visibility and advanced network traffic optimization for a variety of tools. With Big Monitoring Fabric, network owners can gain packet and flow-level access into all parts of their network, steer traffic to tools based on granular policies, and manage their entire monitoring and security infrastructure from a single pane of glass.

SCALE-OUT VISIBILITY THAT OPTIMIZES MONITORING AND SECURITY INFRASTRUCTURE

Big Monitoring Fabric (Big Mon) is a modern network visibility fabric that leverages high-performance open networking switches and SDN controllers to create a single logical NPB. Operating the zero-touch fabric as a single logical NPB enables data centers to flexibly scale-out as needed, deploy tools in a central location — even across a WAN — and manage the entire NPB fabric from a single point.

Big Mon’s intuitive single pane of glass enables NetOps, SecOps and DevOps teams to gain pervasive network visibility with unparalleled simplicity. Multi-tenancy is supported, as different teams can simultaneously (and securely) share the monitoring fabric for both out-of-band (passive) and inline (active) tool deployments. Built-in analytics also provide users tool-independent visibility, with configurable historical time-series views, into the fabric and network.

Big Monitoring Fabric provides the following benefits:

Pervasive Visibility

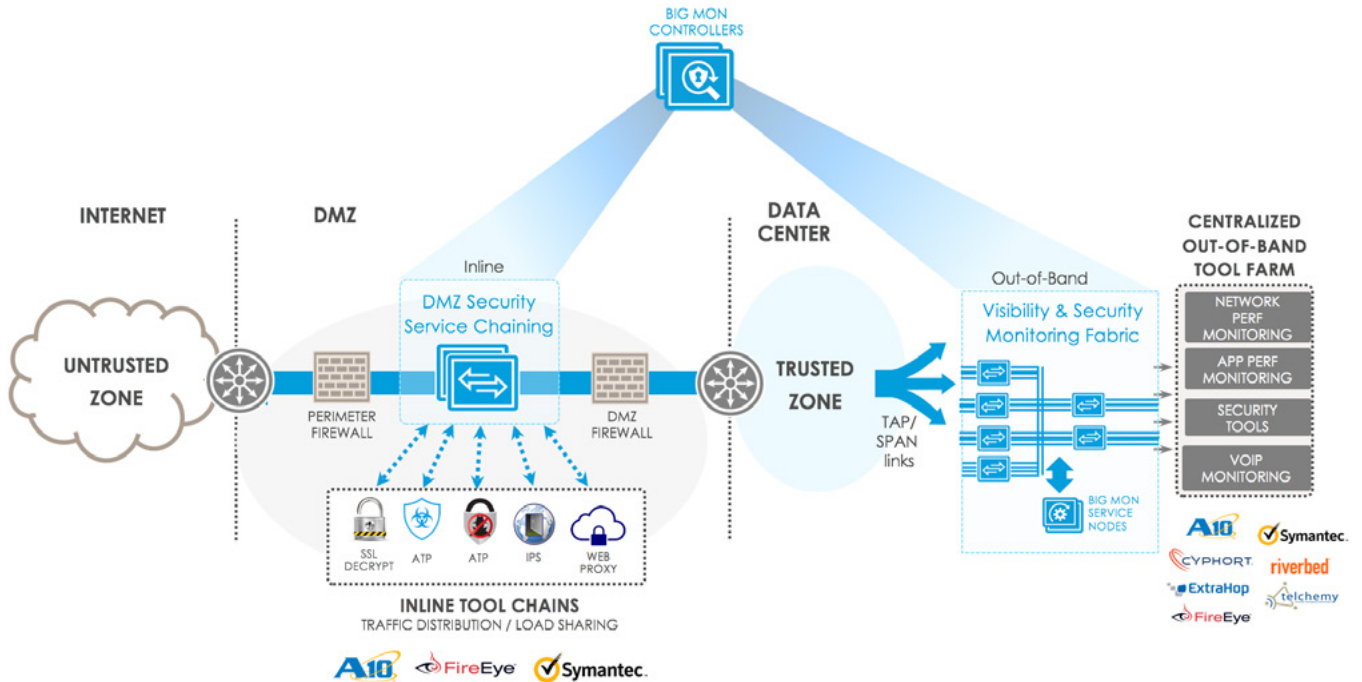
- Extensive out-of-band visibility for data center, remote DCs, POPs, branches, sites, etc.
- Scale-out inline tool chaining with policy-based traffic selection and dynamic threat mitigation for the DMZ
- Monitor tunneled control and data traffic for 4G/LTE networks

Optimization of Every Tool

- Advanced packet/flow selection based on policies — enables better tool usage and faster threat mitigation and event handling

Intuitive, Multi-Tenant Operation

- Single pane of glass — GUI, CLI, REST API
- Multi-tenant usage — secure, simultaneous sharing of the fabric across teams (NetOps, SecOps, DevOps, etc.)
- Built-in Analytics — quickly troubleshoot or perform initial event analysis with detailed, visually rich dashboards



Big Monitoring Fabric has been designed from the ground-up to build pervasive visibility fabrics that address the challenges of traditional NPB-based monitoring solutions — scale and operational complexity. Big Mon’s architecture is inspired by hyperscale networking designs, which consist of open networking switches, SDN controller software, and centralized tool deployment.

Big Mon’s feature-set meets or exceeds that of traditional NPBs, while providing the architectural flexibility, resiliency and operational ease of SDN solutions. Get Started Today

FEATURE	BIG SWITCH	GIGAMON	NETSCOUT/VSS MONITORING	IXIA/ANUE
Basic NPB Functionality				
Filtering / Aggregation / Replication / Load Balancing	✓	✓	✓	✓
Use Cases				
1G/10G/40G/100G Traffic Monitoring	✓	✓	✓	✓
VM Traffic Monitoring	✓	✓	✓	✓
Container Traffic Monitoring	✓	✗	✗	✗
Cloud Monitoring	✓	✓	✗	✗
4G/LTE Traffic Monitoring	✓	✓	✓	✓
Inter-DC Tunneling	✓	✓	✓	✗
DMZ Security Tool Chaining	✓	✓	✓	✓

FEATURE	BIG SWITCH	GIGAMON	NETSCOUT/VSS MONITORING	IXIA/ANUE
Advanced Capabilities				
VLAN Tagging / Stripping	✓	✓	✓	✓
Packet De-duplication	✓	✓	✓	✓
Time stamping	✓	✓	✓	✓
Packet Slicing	✓	✓	✓	✓
Header Stripping	✓	✓	✓	✓
Packet Masking	✓	✓	✓	✗
Deeper Packet Matching (e.g. RegEx matching)	✓	✓	✓	✓
NetFlow / sFlow Generation	✓	✓	✗	✗
Advanced Analytics (packet capture and trackers)	✓	✗	✗	✗
Management				
Single pane of glass management	✓	✗	✗	✗
RBAC / TACAS+ / RADIUS	✓	✓	✓	✓
Event-based Policy Management / API	✓	✓	✓	✗
Scale-out Fabric Architecture	✓	✗	✗	✗

GETTING STARTED WITH OPTIMIZED AND EFFICIENT DATA CENTER MONITORING IS EASIER THAN EVER:

Big Switch Labs: Gain hands-on experience with Big Monitoring Fabric online, for free: labs.bigswitch.com
 Product videos/collateral: bigswitch.com/products/big-monitoring-fabric

ABOUT BIG SWITCH

Big Switch Networks is the Next-Generation Data Center Networking Company. We disrupt the status quo of networking by designing intelligent, automated and flexible networks for our customers around the world. We do so by leveraging the principles of software-defined networking (SDN), coupled with a choice of industry-standard hardware. Big Switch Networks has two solutions: Big Monitoring Fabric, a Next-Generation Network Packet Broker, which enables pervasive security and monitoring of data center and cloud traffic for inline or out-of-band deployments and Big Cloud Fabric, the industry's first Next-Generation switching fabric that allows for choice of switching hardware for OpenStack, VMware, Container and Big Data use cases. Big Switch Networks is headquartered in Santa Clara, CA, with offices located in Tokyo, Sydney, London and Istanbul. For additional information, email info@bigswitch.com, follow [@bigswitch](https://twitter.com/bigswitch), or visit www.bigswitch.com.